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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,257	09/16/2003	Wolfgang Beilfuss	Serie 6059	2873
<div>7590 07/24/2007</div> <div>Linda K. Russell Air Liquide 2700 Post Oak Blvd., Suite 1800 Houston, TX 77056</div>				
<div>EXAMINER</div> <div>HAGOPIAN, CASEY SHEA</div>				
<div>ART UNIT PAPER NUMBER</div> <div>1615</div>				
<div>MAIL DATE DELIVERY MODE</div> <div>07/24/2007 PAPER</div>				

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/663,257

Applicant(s)

BEILFUSS ET AL.

Examiner

Casey Hagopian

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 May 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 18-25,30-48,57 and 58 is/are pending in the application.
- 4a) Of the above claim(s) 22 and 25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-21,23,24,30-48,57 and 58 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 4-30-2004 1-31-2005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

Receipt is acknowledged of applicant's Responses to Restriction Requirement filed 4/12/2007 and 5/17/2007.

Claims 18-25, 30-48, 57 and 58 are currently pending. Claims 1-17, 26-29, 49-56 and 59 have been cancelled. Claim 25 has been amended. Claims 22 and 25 have been withdrawn. Thus, claims 18-21, 23, 24, 30-48, 57 and 58 are currently under consideration.

It is noted that the instant application has been transferred from Examiner Neil Levy to Examiner Casey Hagopian.

### ***Election/Restrictions***

Applicant's election with traverse of the species election in the replies filed on 4/12/2007 and 5/17/2007 is acknowledged. Applicant elected Group I and the following species: (a) N,N'-methylenebis(5-methyloxazolidine), (b) urea and (e) water-based paint. After further consideration, the Examiner is withdrawing the species election for species (e), a technical product because the claims drawn to said technical products are considered intended uses and do not impart any patentable distinction. Applicant's remaining traversal remarks are on the ground(s) that i) claim 18 shares the same technical feature as in claims 21-24 and 41-48 and ii) the formal species and the emission reducing additive species are sufficiently closely related that a search and examination of the entire application is not burdensome. Applicant's traversal is found unpersuasive. The examiner respectfully submits that applicant's remarks regarding

"the same technical feature" is irrelevant because the argument is only relevant to 371 "lack of unity" practice rather than US restriction practice. In regards to applicant's remark, "that a search and examination of the entire application is not burdensome", the examiner respectfully disagrees. Each of the formal species and each of the emission reducing additive species are structurally (i.e., are chemically different) and functionally different compounds. A reference anticipating one species would not necessarily render the others obvious and to search all the different structurally diverse compounds in a single application would necessarily present an undue burden to the examiner. Applicant is reminded that upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141.

The requirement is still deemed proper and is therefore made FINAL.

Claims 22 and 25 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the replies filed on 4/12/2007 and 5/17/2007.

### ***Claim Objections***

**Claims 18 and 20 are objected to because of the following informalities:** said claims contain the phrase "and a process for the preparation of a preservative" in lines 1-2 of the claims. The claims appear to be product claims; no method steps are

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included in said claims or their depending claims. It is suggested that applicant remove said phrase from the claims. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 24, 31-35, 38 and 39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Claims 24 and 32-35 recite the limitation "said additive". There is insufficient antecedent basis for this limitation in the claims. Applicant is advised to add the limitation, "emission-reducing" in between "said" and "additive" in order to form proper antecedent basis.

Claim 31 recites the limitation "said additive" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim. Applicant is advised to add the limitation, "additional" in between "said" and "additive" in order to form proper antecedent basis.

Claims 38 and 39 recite the limitation "said weight" in line 2 of each of the claims. There is insufficient antecedent basis for this limitation in the claims. Applicant is advised to add the limitation, "of said water" immediately following "said weight" in order to form proper antecedent basis.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Claims 18-21, 23, 24, 30-48, 57 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (USPN 7,078,005 B2) over Beilfuss et al. (US 2001/0021711 A1).** Smith teaches an H<sub>2</sub>S-scavenger product comprising (a) a reaction

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product derivable by reaction of a carbonyl group-containing compound with an alcohol, thiol, amide, thioamide, urea or thiourea, said alcohol, thiol, amide, thioamide, urea, thiourea having no amine function, and (b) an amine (col. 6, lines 50-56). Smith further teaches examples of amines including a bisoxazolidine such as N,N'-methylene-bisoxazolidine (col. 6, lines 16-24). Smith teaches utilizing a solvent including glycol, ethanol and mixtures thereof as well as water to dissolve the reaction product (col. 5, lines 49-55). Said solvent reads on the "at least one additional additive" as claimed in instant claim 30. Smith further teaches that the solvent is in concentrations from 10 to 95% by weight and the H<sub>2</sub>S-scavenger product comprises at least 10% by weight of the reaction product (col. 5, lines 57-61). Said percentages read on the ratios claimed in the instant claims 32-35 and 37. Smith also teaches the use of water-free solvents as well as the H<sub>2</sub>S-scavenger product being substantially water-free (col. 5, line 7; claim 21). Said teachings read on "anhydrous" as claimed in the instant claim 40 as well as the percentages claimed in instant claims 38 and 39 because "0%" is within the claimed percentages of "up to about 5%" and "up to about 1%".

It is be noted that the instant claims are product claims and any intended use recitation such as "preservative" (all claims) or "is utilized for..." (claims 57 and 58) does not alone show patentable distinction. A recitation of intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. In other words, if the prior art structure is capable of performing the intended use, then it meets the claim.

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It is also noted that Smith is silent to the particular limitation, "substantially absent of an iodopropynyl compound and a derivative of 1H-benzimidazol-2-carbamic acid", however the mere absence of said iodopropynyl compound and derivative of 1H-benzimidazol-2-carbamic acid fulfills said limitation.

Smith is silent to the particular N,N'-methylene-bisoxazolidine, N,N'-methylenebis(5-methyloxazolidine). Beilfuss teaches bactericidal and fungicidal liquid preparations for industrial products comprising at least one bactericidal N-formal (title; abstract). Beilfuss teaches particular N-formals including amines such as oxazolidines (e.g. 5-methyloxazolidine and monoethanolamine) (paragraph 0018). Beilfuss also teaches the particular N-formal, 3,3'-(methylenebis (5-methyloxazolidine) is preferred (paragraph 0019). One of ordinary skill in the art would have been motivated to include the particular N-formal 3,3'-(methylenebis (5-methyloxazolidine) because of its known bactericidal properties and its effectiveness in industrial products. A practitioner would reasonably expect the incorporation of 3,3'-(methylenebis (5-methyloxazolidine) in the composition advanced by Smith would produce a H<sub>2</sub>S-scavenger and/or a bactericidal composition. Thus, in Smith it would have been obvious at the time the invention was made to include the particular N,N'-methylene-bisoxazolidine, 3,3'-(methylenebis(5-methyloxazolidine) as suggested by Beilfuss.

Smith is teaches solvents including ethanol, glycol and mixtures thereof but is silent to the particular solvent, phenoxyethanol. Beilfuss also teaches the addition of solvents including alcohols, glycols and mixtures thereof and preferably phenoxyethanol (paragraph 0023). One of ordinary skill in the art would have been motivated to include



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the particular solvent, phenoxyethanol because both Smith and Beilfuss teach equivalent solvents that can be interchangeable for similar active agents. Absent of unexpected results, a practitioner would have reasonably expected a composition comprising solvent compatible with 3,3'-(methylenebis (5-methyloxazolidine). Thus, in Smith it would have been obvious to one of ordinary skill in the art at the time the invention was made to include phenoxyethanol as suggested by Beilfuss.

Smith is silent to the particular percentage ranges claimed in the instant claims 41-48, however it would be within the knowledge of one skilled in the art to optimize a composition by way of routine experimentation. Additionally, Beilfuss teaches active ingredient percentages of >50%, preferably >65%, and in particular >75% and accordingly, the solvent percentages are <50%, preferably <35%, and in particular <25% (paragraph 0023). Beilfuss also teaches particular percentages of the N-formals being from 1 to 99%, preferably 10 to 95%, more preferably 20 to 90%, and in particular 40 to 90% (paragraph 0018). Absent of unexpected results, a practitioner would have reasonably expected an optimized composition comprising 3,3'-(methylenebis(5-methyloxazolidine), urea and, if necessary, phenoxyethanol in the percentages claimed. Thus, in Smith it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the particular percentages claimed by applicant.

### ***Double Patenting***

**Applicant is advised that should claim 19 be found allowable, claim 20 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When**

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two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim.

See MPEP § 706.03(k).

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

**Claims 18, 21, 23, 30, 31 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 13 of U.S. Patent No. 6,469,060 B2.** Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter in the patent and in the application are coextensive in scope. The instant claims in the application contain the open-ended language, "comprising" which allows for other ingredients to be included. Said claims are drawn to a composition comprising at least one formal, preferably N,N'-

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methylenebis (5-methyloxazolinidine) and at least one emission-reducing additive.

Claims 30 and 31 of the instant application further include additional additives such as solvents, viscosity modifying agents, etc. Claim 13 of the patent is drawn to a composition comprising: (a) an iodopropynylbutyl compound selected from the group consisting of iodopropynylbutyl esters, ethers, acetals, carbamates and carbonates, (b) a N-formal selected from the group consisting of 3,3'-methylene bis(5-methyloxazolidine), 3,3'-methylene bis(tetrahydro-2H-1,3-oxazine) and 1-aza-5-ethyl-3,7-dioxabicyclo(3,3,0)octane, or a combination thereof and (c) at least one of emission-reducing additives, viscosity-modifying additives, wetting agents, stabilizers and solvents. The limitation, of said claim 13 of the patent, "at least one of emission-reducing additives, viscosity-modifying additives, wetting agents, stabilizers and solvents" suggests to one skill in the art to include any one of the (c) ingredients as well as any combination of the (c) ingredients. Thus, it would have been obvious to one of ordinary skill in the art to arrive at a composition comprising the N-formal, 3,3'-methylene bis(5-methyloxazolidine), and the combination of an emission reducing additive and any one or more of the said viscosity-modifying additives, wetting agents, stabilizers and solvents.

**Claims 18, 21, 23, 30, 31 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 8 of U.S. Patent No. 6,355,679 B1.** Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter in the patent and in the

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application are coextensive in scope. The instant claims in the application contain the open-ended language, "comprising" which allows for other ingredients to be included.

Said claims are drawn to a composition comprising at least one formal, preferably N,N'-methylenebis (5-methyloxazolidine) and at least one emission-reducing additive.

Claims 30 and 31 of the instant application further include additional additives such as solvents, viscosity modifying agents, etc. Claim 8 of the patent is drawn to a

composition comprising: (a) an iodopropynylbutyl compound selected from the group consisting of iodopropynylbutyl esters, ethers, acetals, carbamates and carbonates, (b) either 1,2-propyleneglycol hemiformal or a mixture of 1,2-propyleneglycol hemiformal and a N-formal selected from the group consisting of 3,3'-methylene bis(5-methyloxazolidine), 3,3'-methylene bis(tetrahydro-2H-1,3-oxazine) and 1-aza-5-ethyl-3,7-dioxabicyclo(3,3,0)octane, and (c) at least one of emission-reducing additives,

viscosity-modifying additives, wetting agents, stabilizers and solvents. The limitation, of said claim 8 of the patent, "at least one of emission-reducing additives, viscosity-modifying additives, wetting agents, stabilizers and solvents" suggests to one skill in the art to include any one of the (c) ingredients as well as any combination of the (c) ingredients. Thus, it would have been obvious to one of ordinary skill in the art to arrive at a composition comprising the N-formal, 3,3'-methylene bis(5-methyloxazolidine, and the combination of an emission reducing additive and any one or more of the said viscosity-modifying additives, wetting agents, stabilizers and solvents.

**Conclusion**

All claims have been rejected; no claims are allowed.

**Correspondence**

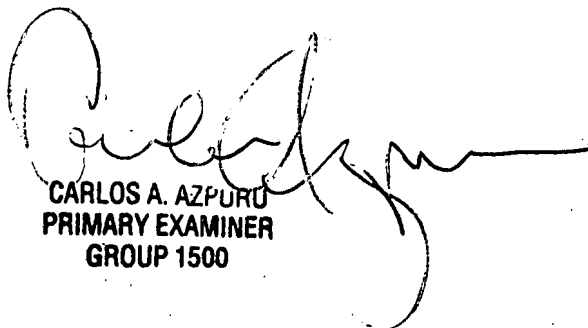
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Casey Hagopian whose telephone number is 571-272-6097. The examiner can normally be reached on Monday through Friday from 7:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carlos Azpuru, can be reached at 571-272-0588. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Casey Hagopian/

Casey Hagopian  
Examiner  
Art Unit 1615

  
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